Silesaurus

Silesaurus is a genus of silesaurid dinosauriform from the Late Triassic, approximately 230 million years ago in the Carnian faunal stage of what is now Poland. Fossilized remains of *Silesaurus* have been found in the Keuper Claystone in Krasiejów near Opole, Silesia, Poland, which is also the origin of its name. The type species, *Silesaurus opolensis*, was described by Jerzy Dzik in 2003. It is known from some 20 skeletons, making it one of the best-represented of the early dinosauriformes.[1]

Silesaurus

Temporal range: Late Triassic, 230 Ma

Pre€ € O S D C P T J K PgN

Reconstructed skeleton

Scientific classification	
Kingdom:	Animalia
Phylum:	Chordata
Clade:	Dracohors
Clade:	†Silesauridae
Clade:	†Sulcimentisauria
Genus:	†*Silesaurus* Dzik, 2003
	Species
▪	***S. opolensis*** Dzik, 2003 (type)

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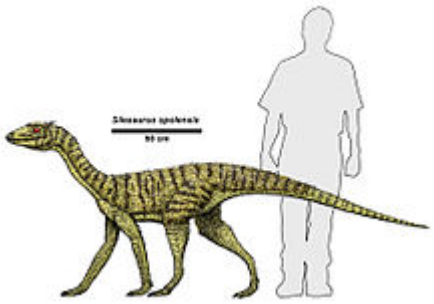
Description



Size compared to a human

Silesaurus measured approximately 2.3 meters (7.5 feet) in length. Lightly built, it was probably a fast and agile animal with an active lifestyle. The snout was narrow with forward-pointing nostrils, and the large orbits likely provided *Silesaurus* with acute vision.

Initially, *Silesaurus* was thought to be strictly herbivorous, but later research on coprolite contents indicates that it may have been insectivorous.[2] The teeth of the animal were small, conical, and serrated, and were distributed irregularly in its jaws. The tip of the dentary had no teeth, and evidence suggests that it was covered by a keratinous beak.[1]

Classification

Scientists think that *Silesaurus* was not a dinosaur, but rather a dinosauriform. Dinosaurian features lacking in *Silesaurus* include an enlarged deltopectoral crest (a muscle attachment on the humerus), and epipophyses (enlarged tendon attachment above the postzygapophysis) on the cervical vertebrae.

However, *Silesaurus* has some dinosaurian characteristics as well:

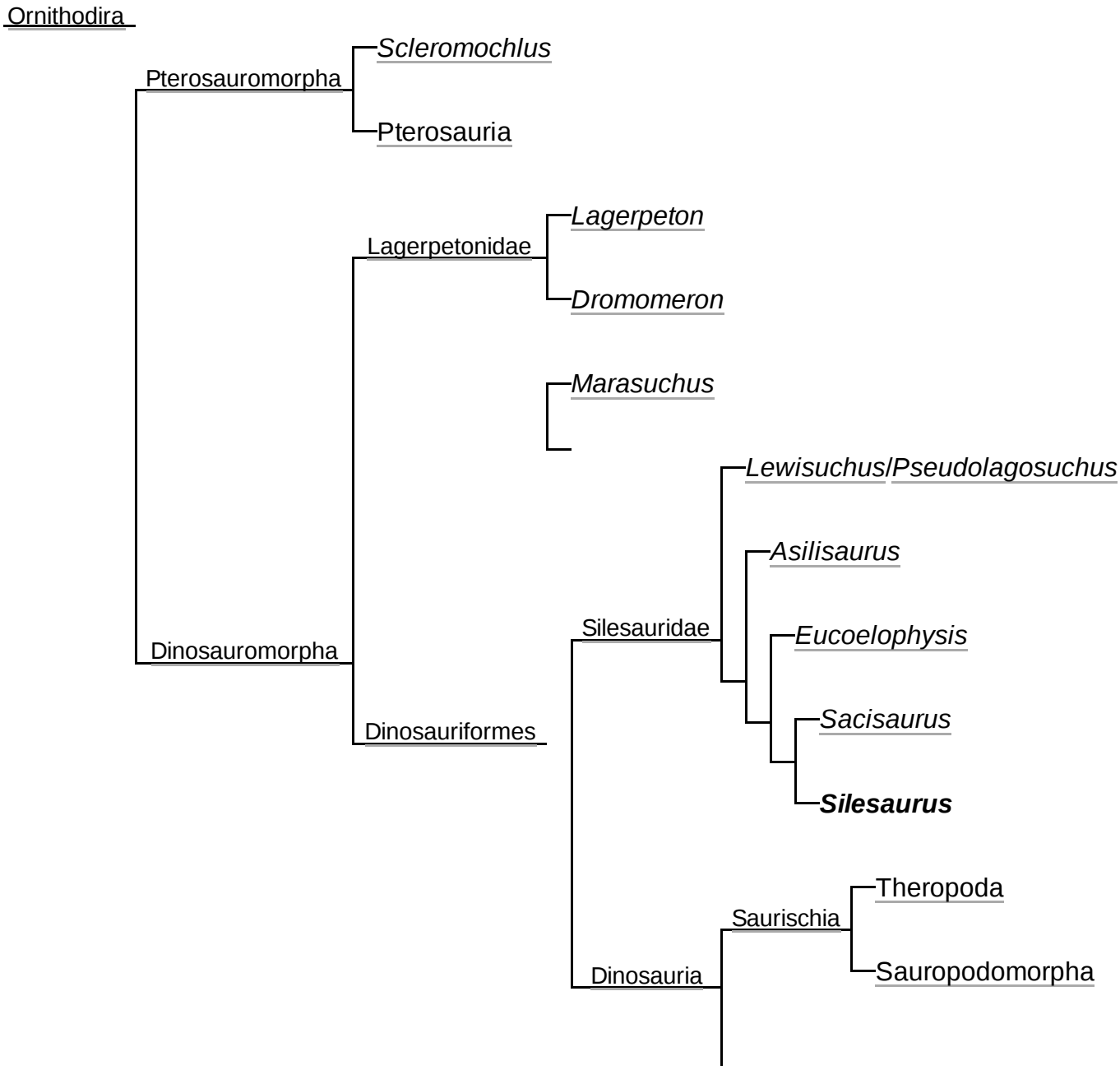
- a brevis shelf (a bone surface on the ilium that functions as an attachment site for tail muscles)
- ischium with a slender shaft
- femur with a reduced tuberosity that borders the ligament of the femoral head
- a prominent lesser trochanter
- an overlap of the ascending process of the astragalus with the tibia
- a concave proximal articular surface for the reception of the distal end of the fibula on the calcaneum

S. opolensis restored with quill-like filaments

As a result, alternative hypotheses place *Silesaurus* at or near the base of the ornithischian dinosaurs. Other scientists propose a basal link between the basal sauropodomorphs and ornithischians.[1]

S. opolensis restored with scales

Systematic position after Nesbitt (2011):[3]



Palaeobiology

Beetle elytra and other arthropod remains have been found in coprolites which have been recovered in the vicinity of *Silesaurus* fossil occurrences. The size and shape of the coprolites combined with the peculiar beaked architecture of *Silesaurus*'s skull may suggest that this animal produced the coprolites and that it could have been wholly or partially insectivorous. It might have fed on insects and other small arthropods by pecking, using the beak-like tip of the snout to accurately target prey in a way similar to modern birds. If so, this would represent the earliest known occurrence of this highly derived mode of feeding and have implications for the understanding of the evolutionary adaptations that would eventually lead up to the origin of dinosaurs.[2]

Silesaurus opolensis and *Polonosuchus silesiacus* models in Poland

Palaeoecology

Silesaurus lived in a subtropical environment similar to the modern Mediterranean basin with alternating summer monsoons and dry winters. The animal shared its environment of extensive swamplands and fern vegetation with a wealth of invertebrates as well as dipnoan and ganoid fishes, temnospondyls, phytosaurs and early pterosaurs.[4]

References

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